



#5

SEQUENCE LISTING

<110> Padigaru, Muralidhara
Kekuda, Ramesh
Colman, Steven D.
Spytek, Kimberly A.
Ballinger, Robert A.
Vernet, Corine A.M.
Li, Li
Shenoy, Suresh G.
Casman, Stacie J.

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<170> PatentIn Ver. 2.1

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Ile	Gly	Leu	Asn	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Phe	50	55	60	
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Phe Lys Arg Lys Leu Phe Ser Lys
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Val	His	Pro	Ser	Gln	Lys	Ser	Ser	Leu	His	Leu	Asn	Lys	Ile	Leu	Phe	260	265	270	
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Ile	Ala	Val	Val	Leu	Ala	Glu	His	Cys	Met	Leu	Ala	Val	Met	Ala	Tyr	115	120	125	
Asp	Arg	Tyr	Met	Ala	Ile	Cys	Asn	Pro	Leu	Leu	Tyr	Ser	Ser	Lys	Met	130	135	140	
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Asp	Glu	Ser	Val	Glu	Gln	Gly	Lys	Met	Val	Ala	Val	Phe	Tyr	Thr	Thr	275	280	285	
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 Ile Leu Ala Ser Cys Val Ser Glu Asp Lys Arg Ile Ser Leu Ala Gly
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Cys Gly Ala Gln Leu Phe Phe Ser Cys Val Val Ala Tyr Thr Glu Cys
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165 170 175

Phe Phe Cys Asp Ala Pro Pro Leu Val Lys Met Ser Cys Thr Asp Thr
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Arg Val Tyr Glu Lys Val Leu Leu Gly Val Val Gly Phe Thr Ala Leu
195 200 205

Ser Ser Ile Leu Ala Ile Leu Ile Ser Tyr Val Asn Ile Leu Leu Ala
210 215 220

Ile Leu Arg Ile His Ser Ala Ser Gly Arg His Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Ile Ser Val Met Leu Phe Tyr Gly Ser Leu Leu
245 250 255

Phe Met Tyr Ser Arg Pro Ser Ser Thr Tyr Ser Leu Glu Arg Asp Lys
260 265 270

Val Ala Ala Leu Phe Tyr Thr Val Ile Asn Pro Leu Leu Asn Pro Leu
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Thr Gln Thr Ile Gln Pro Gln Thr
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tggagaccat gtggacctac aacctagcct tctgtggccc caatgaaatt aatcacttct 600
actgtgcgga cccaccactg attaaactgg cttgttctga cacctacaac aaggagtgtg 660
caatgtttat tgtggctggc tggaaccttt ctttttctct cttcatcata tgtatttctc 720
acctttacat tttccctgct attttaaaga ttcgctctac agagggcagg caaaaagctt 780
tttctacctg tggctcccat ctgacagctg tcactatatt ctatgcaacc cttttcttca 840
tgtatctcag acccccctca aaggaatctg ttgaacaggg taaaatggta gctgtatttt 900
ataccacagt aatccctatg ctgaacctta taatttatag ccttagaaat aaaaatgtaa 960
aagaagcatt aatcaaagag ctgtcaatga agatatactt ttcttaaaaa tca 1013
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<210> 14

<211> 332

<212> PRT

<213> Homo sapiens

<400> 14

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Met Leu Leu Leu Tyr Cys Asn Pro Ile Tyr Met Lys Ser Ser Phe Leu
  1              5              10              15

Pro Pro Lys Glu Ile Met Arg Arg Asn Cys Thr Leu Val Thr Glu Phe
  20              25              30

Ile Leu Leu Gly Leu Thr Ser Arg Arg Glu Leu Gln Ile Leu Leu Phe
  35              40              45

Thr Leu Phe Leu Ala Ile Tyr Met Val Thr Val Ala Gly Asn Leu Gly
  50              55              60

Met Ile Val Leu Ile Gln Ala Asn Ala Trp Leu His Met Pro Met Tyr
  65              70              75              80

Phe Phe Leu Ser His Leu Ser Phe Val Asp Leu Cys Phe Ser Ser Asn
  85              90              95

Val Thr Pro Lys Met Leu Glu Ile Phe Leu Ser Glu Lys Lys Ser Ile
 100              105              110

Ser Tyr Pro Ala Cys Leu Val Gln Cys Tyr Leu Phe Ile Ala Leu Val
```

115		120		125
His Val Glu Ile Tyr Ile Leu Ala Val Met Ala Phe Asp Arg Tyr Met				
130		135		140
Ala Ile Cys Asn Pro Leu Leu Tyr Gly Ser Arg Met Ser Lys Ser Val				
145		150		155
				160
Cys Ser Phe Leu Ile Thr Val Pro Tyr Val Tyr Gly Ala Leu Thr Gly				
		165		170
				175
Leu Met Glu Thr Met Trp Thr Tyr Asn Leu Ala Phe Cys Gly Pro Asn				
		180		185
				190
Glu Ile Asn His Phe Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ala				
		195		200
				205
Cys Ser Asp Thr Tyr Asn Lys Glu Leu Ser Met Phe Ile Val Ala Gly				
		210		215
				220
Trp Asn Leu Ser Phe Ser Leu Phe Ile Ile Cys Ile Ser Tyr Leu Tyr				
		225		230
				235
				240
Ile Phe Pro Ala Ile Leu Lys Ile Arg Ser Thr Glu Gly Arg Gln Lys				
		245		250
				255
Ala Phe Ser Thr Cys Gly Ser His Leu Thr Ala Val Thr Ile Phe Tyr				
		260		265
				270
Ala Thr Leu Phe Phe Met Tyr Leu Arg Pro Pro Ser Lys Glu Ser Val				
		275		280
				285
Glu Gln Gly Lys Met Val Ala Val Phe Tyr Thr Thr Val Ile Pro Met				
		290		295
				300
Leu Asn Leu Ile Ile Tyr Ser Leu Arg Asn Lys Asn Val Lys Glu Ala				
		305		310
				315
				320
Leu Ile Lys Glu Leu Ser Met Lys Ile Tyr Phe Ser				
		325		330

<210> 15

<211> 951

<212> DNA

<213> Homo sapiens

<400> 15

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catgggaaga tgggtgaacc agtcctacac agatggcttc ttcctcttag gcatcttttc 60
ccacagccag actgaccttg tcctcttctc tgcagttatg gtggctctca cagtggccct 120
ctgtgggaat gtccctctca tcttcctcat ctacctggac gctggacttc acaccccat 180
gtacttcttc ctacagccagc tctccctcat ggacctcatg ttggctctgta acattgtgcc 240
aaagatggca gccaaacttc tgtctggcag gaagtccatc tcctttgtgg gctgtggcat 300
acaaattggc ttttttgtct ctcttgctgg atctgagggg ctcttgctgg gactcatggc 360
ttatgaccgc tacgtggcgc ttagccaccc acttcactat cccatcctca tgaatcagag 420
ggctctgtctc cagattactg ggagctcctg ggcctttggg ataatagatg gagtgattca 480
gatggtgcca gccatgggct taccttactg tggtctgagg agcgtggatc actttttctg 540
tgaggatcaa gctttattga agctggcctg tgcagacact tccctttttg acaccctcct 600
ctttgcttgc tgtgtcttca tgcttctcct tcccttctcc atcatcatgg cctcctatgc 660
ttgcatccta ggggctgtgc tccgaatacg ctctgctcag gcctggaaaa aagccttggc 720
cacctgctcc tccaccta aa cagctgtcac cctcttctat ggggcagcca tgttcatgta 780
cctgaggcct aggcgctacc gggcccctag ccatgacaag gtggcctcta tcttctacac 840
agtccttact cccatgctga accccctcat ttacagcttg aggaatgggg aggtgatggg 900
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```

<210> 16

<211> 315

<212> PRT

<213> Homo sapiens

<400> 16

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Met Gly Arg Trp Val Asn Gln Ser Tyr Thr Asp Gly Phe Phe Leu Leu
  1             5             10             15

Gly Ile Phe Ser His Ser Gln Thr Asp Leu Val Leu Phe Ser Ala Val
          20             25             30

Met Val Val Phe Thr Val Ala Leu Cys Gly Asn Val Leu Leu Ile Phe
          35             40             45

Leu Ile Tyr Leu Asp Ala Gly Leu His Thr Pro Met Tyr Phe Phe Leu
          50             55             60

Ser Gln Leu Ser Leu Met Asp Leu Met Leu Val Cys Asn Ile Val Pro
          65             70             75             80

Lys Met Ala Ala Asn Phe Leu Ser Gly Arg Lys Ser Ile Ser Phe Val
          85             90             95

Gly Cys Gly Ile Gln Ile Gly Phe Phe Val Ser Leu Val Gly Ser Glu
          100            105            110

Gly Leu Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Val Ser
          115            120            125

```


His Pro Leu His Tyr Pro Ile Leu Met Asn Gln Arg Val Cys Leu Gln
 130 135 140
 Ile Thr Gly Ser Ser Trp Ala Phe Gly Ile Ile Asp Gly Val Ile Gln
 145 150 155 160
 Met Val Ala Ala Met Gly Leu Pro Tyr Cys Gly Leu Arg Ser Val Asp
 165 170 175
 His Phe Phe Cys Glu Val Gln Ala Leu Leu Lys Leu Ala Cys Ala Asp
 180 185 190
 Thr Ser Leu Phe Asp Thr Leu Leu Phe Ala Cys Cys Val Phe Met Leu
 195 200 205
 Leu Leu Pro Phe Ser Ile Ile Met Ala Ser Tyr Ala Cys Ile Leu Gly
 210 215 220
 Ala Val Leu Arg Ile Arg Ser Ala Gln Ala Trp Lys Lys Ala Leu Ala
 225 230 235 240
 Thr Cys Ser Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ala Ala
 245 250 255
 Met Phe Met Tyr Leu Arg Pro Arg Arg Tyr Arg Ala Pro Ser His Asp
 260 265 270
 Lys Val Ala Ser Ile Phe Tyr Thr Val Leu Thr Pro Met Leu Asn Pro
 275 280 285
 Leu Ile Tyr Ser Leu Arg Asn Gly Glu Val Met Gly Ala Leu Arg Lys
 290 295 300
 Gly Leu Asp Arg Cys Arg Ile Gly Ser Gln His
 305 310 315

<210> 17

<211> 1015

<212> DNA

<213> Homo sapiens

<400> 17

gttcctgcaa cttcacacat gccacctttg tgcttattgg tatcccagga ttagagaaag 60
 cccatttctg ggttggcttc cccctccttt ccatgtatgt agtggcaatg tttggaaact 120
 gcatcgtggt cttcatcgta aggacggaac gcagcctgca cgctccgatg tacctctttc 180
 tctgcatgct tgcagccatt gacctggcct tatccacatc caccatgcct aagatccttg 240
 cccttttctg gtttgattcc cgagagatta gctttgaggc ctgtcttacc cagatgttct 300

```

ttattcatgc cctctcagcc attgaatcca ccatactgct ggccatggcc tttgaccgtt 360
atgtggccat ctgccaccca ctgcgccatg ctgcagtgt caacaatata gtaacagccc 420
agattggcat cgtggctgtg gtccgcggat ccctcttttt tttccactg cctctgctga 480
tcaagcggct ggccttctgc cactccaatg tcctctcgca ctctattgt gtccaccagg 540
atgtaatgaa gttggcctat gcagacactt tgcccaatgt ggtatatggt cttactgcca 600
ttctgctggt catgggcgtg gacgtaatgt tcatactcctt gtcctatttt ctgataatac 660
gaacgggttct gcaactgcct tccaagtcag agcggggccaa ggcctttgga acctgtgtgt 720
cacacattgg tgtgtactc gccttctatg tgccacttat tggcctctca gttgtacacc 780
gctttggaaa cagccttcat ccattgtgc gtgttgtcat gggtgacatc tacctgctgc 840
tgccctcctgt catcaatccc atcatctatg gtgccaaaac caaacagatc agaacacggg 900
tgctggctat gttcaagatc agctgtgaca aggacttgca ggctgtggga ggcaagtgc 960
ccttaacact acacttctcc ttatctttat tggcttgata aacataatta tttct 1015

```

<210> 18

<211> 318

<212> PRT

<213> Homo sapiens

<400> 18

```

Ser Cys Asn Phe Thr His Ala Thr Phe Val Leu Ile Gly Ile Pro Gly
  1                      5                      10                      15

```

```

Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser Met Tyr
          20                      25                      30

```

```

Val Val Ala Met Phe Gly Asn Cys Ile Val Val Phe Ile Val Arg Thr
          35                      40                      45

```

```

Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met Leu Ala
  50                      55                      60

```

```

Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile Leu Ala
  65                      70                      75                      80

```

```

Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Phe Glu Ala Cys Leu Thr
          85                      90                      95

```

```

Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr Ile Leu
          100                      105                      110

```

```

Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg
          115                      120                      125

```

```

His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly Ile Val
          130                      135                      140

```

```

Ala Val Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu Leu Ile

```

145		150		155		160
Lys Arg Leu Ala Phe Cys His Ser Asn Val Leu Ser His Ser Tyr Cys						
	165		170		175	
Val His Gln Asp Val Met Lys Leu Ala Tyr Ala Asp Thr Leu Pro Asn						
	180		185		190	
Val Val Tyr Gly Leu Thr Ala Ile Leu Leu Val Met Gly Val Asp Val						
	195		200		205	
Met Phe Ile Ser Leu Ser Tyr Phe Leu Ile Ile Arg Thr Val Leu Gln						
	210		215		220	
Leu Pro Ser Lys Ser Glu Arg Ala Lys Ala Phe Gly Thr Cys Val Ser						
225		230		235		240
His Ile Gly Val Val Leu Ala Phe Tyr Val Pro Leu Ile Gly Leu Ser						
	245		250		255	
Val Val His Arg Phe Gly Asn Ser Leu His Pro Ile Val Arg Val Val						
	260		265		270	
Met Gly Asp Ile Tyr Leu Leu Leu Pro Pro Val Ile Asn Pro Ile Ile						
	275		280		285	
Tyr Gly Ala Lys Thr Lys Gln Ile Arg Thr Arg Val Leu Ala Met Phe						
	290		295		300	
Lys Ile Ser Cys Asp Lys Asp Leu Gln Ala Val Gly Gly Lys						
305		310		315		

<210> 19

<211> 937

<212> DNA

<213> Homo sapiens

<400> 19

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aatggctgca ggaaatcact ctacagtgac agagttcatt ctcaagggtt taacgaagag 60
agcagacctc cagctcccc tctttctcct ctctctcggg atctacttgg tcaccatcgt 120
ggggaacctg ggcattgatca ctctaatttg tctgaactct cagctgcaca ccccatgta 180
ctactttctc agcaatctgt cactcatgga cctctgctac tcctccgtca ttaccctaa 240
gatgctggtg aacttttgtt cagagaaaaa catcatctcc tacgcagggt gcatgtcaca 300
gctctacttc ttccttggtt ttgtcattgc tgagtgtctac atgctgagag tgatggccta 360
cgaccgctat gttgccatct gccacccttt gctttacaac atcattatgt ctcatcacac 420
ctgcctgctg ctggtggctg tgggtctacg catcggactc attgggtcca caatagaaac 480
tggcctcatg ttaaaactgc cctattgtga gcacctcatc agtcactact tctgtgacat 540

```

```

cctccctctc atgaagctgt cctgctctag cacctatgat gttgagatga cagtcttctt 600
tttggctgga ttcaacatca tagtcacgag cttaacagtt cttgtttctt acaccttcac 660
tctctccagc atcctcgga tcagcaccac agaggggaga tccaaagcct tcagcacctg 720
cagctcccac cttgcagccg tgggaatgtt ctatggatca actgcattca tgtacttaaa 780
accctccaca atcagttcct tgaccagga gaatgtggcc tctgtgttcc acaccacggt 840
aatcccatg ttgaatcccc taatctacag cctgaggaac aaggaagtaa aggctgccgt 900
gcagaaaacg ctgaggggta aactgttttg atgcaaa 937

```

<210> 20

<211> 309

<212> PRT

<213> Homo sapiens

<400> 20

```

Met Ala Ala Gly Asn His Ser Thr Val Thr Glu Phe Ile Leu Lys Gly
  1             5             10             15

```

```

Leu Thr Lys Arg Ala Asp Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
          20             25             30

```

```

Gly Ile Tyr Leu Val Thr Ile Val Gly Asn Leu Gly Met Ile Thr Leu
          35             40             45

```

```

Ile Cys Leu Asn Ser Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
          50             55             60

```

```

Asn Leu Ser Leu Met Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Lys
          65             70             75             80

```

```

Met Leu Val Asn Phe Val Ser Glu Lys Asn Ile Ile Ser Tyr Ala Gly
          85             90             95

```

```

Cys Met Ser Gln Leu Tyr Phe Phe Leu Val Phe Val Ile Ala Glu Cys
          100            105            110

```

```

Tyr Met Leu Arg Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
          115            120            125

```

```

Pro Leu Leu Tyr Asn Ile Ile Met Ser His His Thr Cys Leu Leu Leu
          130            135            140

```

```

Val Ala Val Val Tyr Ala Ile Gly Leu Ile Gly Ser Thr Ile Glu Thr
          145            150            155            160

```

```

Gly Leu Met Leu Lys Leu Pro Tyr Cys Glu His Leu Ile Ser His Tyr
          165            170            175

```

Phe Cys Asp Ile Leu Pro Leu Met Lys Leu Ser Cys Ser Ser Thr Tyr
180 185 190

Asp Val Glu Met Thr Val Phe Phe Leu Ala Gly Phe Asn Ile Ile Val
195 200 205

Thr Ser Leu Thr Val Leu Val Ser Tyr Thr Phe Ile Leu Ser Ser Ile
210 215 220

Leu Gly Ile Ser Thr Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Ser Ser His Leu Ala Ala Val Gly Met Phe Tyr Gly Ser Thr Ala Phe
245 250 255

Met Tyr Leu Lys Pro Ser Thr Ile Ser Ser Leu Thr Gln Glu Asn Val
260 265 270

Ala Ser Val Phe His Thr Thr Val Ile Pro Met Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Ala Ala Val Gln Lys Thr Leu
290 295 300

Arg Gly Lys Leu Phe
305

<210> 21

<211> 1003

<212> DNA

<213> Homo sapiens

<400> 21

tgatcataat gaatgtgagc ttcaagactg gattcctcct catgggggttc tctgatgagc 60
gtaaccttca gattttacat gcagtgctct ttttgatcac atacctgttg gccatcatgg 120
gcaatctgct cattatcacc atcatcacct tggaccaacg tctgcattct cccatgtact 180
acttcttgaa gcacctctct tttttggatc tctgcttcat ctctgttact gttcctcagt 240
ctattgcaaa ctcaactcatg aacaatgggt tcatttctct tggtcagtgt atgtttcagg 300
ttttcttctt catagctctg gcctcatcag aagtagctat tctcacagtg atgtcttatg 360
accggtatgt tgccatctgt cggccactgc agtatgagac aattatggat ccccatgcct 420
gcaagtgcgc agtgatagct gtatggatgg ctggaggact atctggggtc ctacacacag 480
gtgttaattt ctcaattcct ctttgtggga agagaattat tcaccagttc ttctgtgaca 540
ttccccaagt gctaaacta gcttggttct atgaattcat taatgagatt gcagtggctg 600
catttacaac atccacagcc tttgtctgtt taatagccat agtcttctcc tatactcaga 660
tcttctcaac tgtgatgaga attccatcag ctgatagtcg gactaagggtg ttctccacct 720
gtctaccaca tttgtttgta gtcattgttct tcctctcagc tgcaggcttt gaatttctaa 780
gacctccttc agattccctg tcagcaatgg acctcgtatt ctccatattc tacactgtga 840

tacctccaac actcaatcca ctcatctaca gcttgaggaa tgaggccatg aaagcagctc 900
 tgaggaaagt gttgtcaaaa gaagaat ttcgagagaat ggtatatgtt aaagctatat 960
 tcaatctcta aagagacaac aaactaagag gcattgctac tat 1003

<210> 22

<211> 320

<212> PRT

<213> Homo sapiens

<400> 22

Met Asn Val Ser Phe Lys Thr Gly Phe Leu Leu Met Gly Phe Ser Asp
 1 5 10 15

Glu Arg Asn Leu Gln Ile Leu His Ala Val Leu Phe Leu Ile Thr Tyr
 20 25 30

Leu Leu Ala Ile Met Gly Asn Leu Leu Ile Ile Thr Ile Ile Thr Leu
 35 40 45

Asp Gln Arg Leu His Ser Pro Met Tyr Tyr Phe Leu Lys His Leu Ser
 50 55 60

Phe Leu Asp Leu Cys Phe Ile Ser Val Thr Val Pro Gln Ser Ile Ala
 65 70 75 80

Asn Ser Leu Met Asn Asn Gly Phe Ile Ser Leu Gly Gln Cys Met Leu
 85 90 95

Gln Val Phe Phe Phe Ile Ala Leu Ala Ser Ser Glu Val Ala Ile Leu
 100 105 110

Thr Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Arg Pro Leu Gln
 115 120 125

Tyr Glu Thr Ile Met Asp Pro His Ala Cys Lys Cys Ala Val Ile Ala
 130 135 140

Val Trp Met Ala Gly Gly Leu Ser Gly Leu Leu His Thr Gly Val Asn
 145 150 155 160

Phe Ser Ile Pro Leu Cys Gly Lys Arg Ile Ile His Gln Phe Phe Cys
 165 170 175

Asp Ile Pro Gln Met Leu Lys Leu Ala Cys Ser Tyr Glu Phe Ile Asn
 180 185 190

Glu Ile Ala Val Ala Ala Phe Thr Thr Ser Thr Ala Phe Val Cys Leu

195	200	205
Ile Ala Ile Val Phe Ser Tyr Thr Gln Ile Phe Ser Thr Val Met Arg		
210	215	220
Ile Pro Ser Ala Asp Ser Arg Thr Lys Val Phe Ser Thr Cys Leu Pro		
225	230	235 240
His Leu Phe Val Val Met Phe Phe Leu Ser Ala Ala Gly Phe Glu Phe		
245	250	255
Leu Arg Pro Pro Ser Asp Ser Leu Ser Ala Met Asp Leu Val Phe Ser		
260	265	270
Ile Phe Tyr Thr Val Ile Pro Pro Thr Leu Asn Pro Leu Ile Tyr Ser		
275	280	285
Leu Arg Asn Glu Ala Met Lys Ala Ala Leu Arg Lys Val Leu Ser Lys		
290	295	300
Glu Glu Phe Ser Arg Arg Met Val Tyr Val Lys Ala Ile Phe Asn Leu		
305	310	315 320

<210> 23
 <211> 1003
 <212> DNA
 <213> Homo sapiens

<400> 23
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 gtaaccttca gattttacat gcagtgtctt ttttgatcac atacctgttg gccatcatgg 120
 gcaatctgct cattatcacc atcatcacct tggaccaacg tctgcattct cccatgtact 180
 acttcttgaa gcacctctct tttttggatc tctgtttcat ctctgttact gttcctcagt 240
 ctattgcaaa ctactcatg aacaatgggtt tcattttctct tggtcagtgt atgcttcagg 300
 ttttcttctt catagctctg gcctcatcag aagtagctat tctcacagtg atgtcttatg 360
 accggtatgt tgccatctgt cggccactgc agtatgagac aattatggat ccccatgcct 420
 gcaagtgcgc agtgatagct gtatggatgg ctggaggact atctgggctc ctacacacag 480
 gtgttaattt ctcaattcct ctttgtggga agagaattat tcaccagttc ttctgtgaca 540
 ttcccaaat gctaaaacta gcttgttctt atgaattcat taatgagatt gcagtggctg 600
 catttacaac atccacagcc tttgtctgtt taatagccat agtcttctcc tatactcaga 660
 tcttctcaac tgtgatgaga attccatcag ctgatagtcg gactaagggtg ttctccacct 720
 gtctaccaca tttgtttgta gtcattgtct tcctctcagc tgcaggcttt gaatttctaa 780
 gacctccttc agattccctg tcagcaatgg acctcgatt ctccatattc tacactgtga 840
 tacctccaac actcaatcca ctcatctaca gcttgaggaa tgaggccatg aaagcagctc 900

tgaggaaagt gttgtcaaaa gaagaatttt ctcggagaat ggtatatgtt aaagctatat 960
tcaatctcta aagagacaac aaactaagag gcattgctac tat 1003

<210> 24
<211> 320
<212> PRT
<213> Homo sapiens

<400> 24
Met Asn Val Ser Phe Lys Thr Gly Phe Leu Leu Met Gly Phe Ser Asp
1 5 10 15
Glu Arg Asn Leu Gln Ile Leu His Ala Val Leu Phe Leu Ile Thr Tyr
20 25 30
Leu Leu Ala Ile Met Gly Asn Leu Leu Ile Ile Thr Ile Ile Thr Leu
35 40 45
Asp Gln Arg Leu His Ser Pro Met Tyr Tyr Phe Leu Lys His Leu Ser
50 55 60
Phe Leu Asp Leu Cys Phe Ile Ser Val Thr Val Pro Gln Ser Ile Ala
65 70 75 80
Asn Ser Leu Met Asn Asn Gly Phe Ile Ser Leu Gly Gln Cys Met Leu
85 90 95
Gln Val Phe Phe Phe Ile Ala Leu Ala Ser Ser Glu Val Ala Ile Leu
100 105 110
Thr Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Arg Pro Leu Gln
115 120 125
Tyr Glu Thr Ile Met Asp Pro His Ala Cys Lys Cys Ala Val Ile Ala
130 135 140
Val Trp Met Ala Gly Gly Leu Ser Gly Leu Leu His Thr Gly Val Asn
145 150 155 160
Phe Ser Ile Pro Leu Cys Gly Lys Arg Ile Ile His Gln Phe Phe Cys
165 170 175
Asp Ile Pro Gln Met Leu Lys Leu Ala Cys Ser Tyr Glu Phe Ile Asn
180 185 190
Glu Ile Ala Val Ala Ala Phe Thr Thr Ser Thr Ala Phe Val Cys Leu
195 200 205

Ile	Ala	Ile	Val	Phe	Ser	Tyr	Thr	Gln	Ile	Phe	Ser	Thr	Val	Met	Arg
210						215					220				
Ile	Pro	Ser	Ala	Asp	Ser	Arg	Thr	Lys	Val	Phe	Ser	Thr	Cys	Leu	Pro
225					230					235				240	
His	Leu	Phe	Val	Val	Met	Phe	Phe	Leu	Ser	Ala	Ala	Gly	Phe	Glu	Phe
			245					250					255		
Leu	Arg	Pro	Pro	Ser	Asp	Ser	Leu	Ser	Ala	Met	Asp	Leu	Val	Phe	Ser
		260						265					270		
Ile	Phe	Tyr	Thr	Val	Ile	Pro	Pro	Thr	Leu	Asn	Pro	Leu	Ile	Tyr	Ser
	275						280					285			
Leu	Arg	Asn	Glu	Ala	Met	Lys	Ala	Ala	Leu	Arg	Lys	Val	Leu	Ser	Lys
290						295					300				
Glu	Glu	Phe	Ser	Arg	Arg	Met	Val	Tyr	Val	Lys	Ala	Ile	Phe	Asn	Leu
305					310					315					320

<210> 25
 <211> 999
 <212> DNA
 <213> Homo sapiens

<400> 25
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 tctatgtgct gaccatggca gggaacctgg gcatcatcac cctcaccagt gttgactctc 180
 gacttcaaac ccccatgtac tttttcctga gacatctagc tatcatcaat cttggcaact 240
 ctactgtcat tgcccctaaa atgctgatga acttttttagt aaagaagaaa actacctcat 300
 tctatgaatg tgccacccaa ctgggagggg tcttggttctt tattgtatcg gaggtaatga 360
 tgctggctgt gatggcctat gaccgctatg tggccatttg taaccctctg ctctacatgg 420
 tgggtggtgtc tcggcgggctc tgccctcctgc tgggtgtccct cacgtacctc tatggctttt 480
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 tcaatcatit ttactgtgat attgcacctc tgtagcatt atcttgctct gatacttaca 600
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<210> 26

<211> 315

<212> PRT

<213> Homo sapiens

<400> 26

Met Ala Pro Glu Asn Phe Thr Arg Val Thr Glu Phe Ile Leu Thr Gly
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Val Ser Ser Cys Pro Glu Leu Gln Ile Pro Leu Phe Leu Val Phe Leu
20 25 30

Val Leu Tyr Val Leu Thr Met Ala Gly Asn Leu Gly Ile Ile Thr Leu
35 40 45

Thr Ser Val Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg
50 55 60

His Leu Ala Ile Ile Asn Leu Gly Asn Ser Thr Val Ile Ala Pro Lys
65 70 75 80

Met Leu Met Asn Phe Leu Val Lys Lys Lys Thr Thr Ser Phe Tyr Glu
85 90 95

Cys Ala Thr Gln Leu Gly Gly Phe Leu Phe Phe Ile Val Ser Glu Val
100 105 110

Met Met Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Met Val Val Val Ser Arg Arg Leu Cys Leu Leu Leu
130 135 140

Val Ser Leu Thr Tyr Leu Tyr Gly Phe Ser Thr Ala Ile Val Val Ser
145 150 155 160

Pro Cys Ile Phe Ser Val Ser Tyr Cys Ser Ser Asn Ile Ile Asn His
165 170 175

Phe Tyr Cys Asp Ile Ala Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr
180 185 190

Tyr Ile Pro Glu Thr Ile Val Phe Ile Ser Ala Ala Thr Asn Leu Phe
195 200 205

Phe Ser Met Ile Thr Val Leu Val Ser Tyr Phe Asn Ile Val Leu Ser
 210 215 220

Ile Leu Arg Ile Arg Ser Pro Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Met Ile Ala Val Thr Val Phe Tyr Gly Thr Met Leu
 245 250 255

Phe Met Tyr Leu Gln Pro Gln Thr Asn His Ser Leu Asp Thr Asp Lys
 260 265 270

Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Asn Asp Val Asn Val Ala Leu Lys Lys Phe
 290 295 300

Met Glu Asn Pro Cys Tyr Ser Phe Lys Ser Met
 305 310 315

<210> 27

<211> 999

<212> DNA

<213> Homo sapiens

<400> 27

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<210> 28

<211> 321

<212> PRT

<213> Homo sapiens

<400> 28

Met Ser Ile Asn Cys Ser Leu Trp Gln Glu Asn Ser Leu Ser Val Lys
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Arg Phe Ala Phe Ser Lys Phe Ser Glu Val Pro Gly Glu Cys Phe Leu
20 25 30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
35 40 45

Glu Leu Ile Ala Ile Ala Ile Cys Thr Ser Pro Ala Leu His Thr Pro
50 55 60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
65 70 75 80

Cys Ser Val Ile Pro Lys Met Leu Gln Ser Leu Val Ser Glu Ala Arg
85 90 95

Glu Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Thr Phe
100 105 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg
115 120 125

Cys Met Ala Ile Cys Ser Pro Leu His Tyr Ala Thr Arg Met Ser His
130 135 140

Gly Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145 150 155 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Asn Phe Cys Gly
165 170 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
180 185 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Ala
195 200 205

Ala Ile Leu Cys Ile Ser Ser Pro Phe Leu Leu Ile Ile Tyr Ser Tyr
210 215 220

Val Arg Ile Leu Val Ala Val Leu Val Met Pro Ser Pro Glu Gly Arg

225		230		235		240									
His	Lys	Ala	Leu	Ser	Thr	Cys	Ser	Ser	His	Leu	Leu	Val	Val	Thr	Leu
			245						250					255	
Phe	Phe	Gly	Ser	Gly	Ser	Ile	Thr	Tyr	Leu	Arg	Pro	Lys	Ser	Ser	His
		260						265					270		
Leu	Pro	Gly	Met	Asp	Lys	Leu	Leu	Ala	Leu	Phe	Tyr	Thr	Ala	Val	Thr
		275						280					285		
Ser	Met	Leu	Asn	Pro	Ile	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Lys
	290						295				300				
Thr	Ala	Leu	Arg	Lys	Thr	Leu	Ser	Leu	Lys	Thr	Ser	Arg	Ala	Ile	Asn
305					310					315				320	

Arg

<210> 29
 <211> 999
 <212> DNA
 <213> Homo sapiens

<400> 29

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<210> 30
 <211> 321

<212> PRT

<213> Homo sapiens

<400> 30

Met Ser Ile Asn Cys Ser Leu Trp Gln Glu Asn Ser Leu Ser Val Lys
1 5 10 15

Arg Phe Ala Phe Ser Lys Phe Ser Glu Val Pro Gly Glu Cys Phe Leu
20 25 30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
35 40 45

Glu Leu Ile Ala Ile Ala Ile Cys Thr Ser Pro Ala Leu His Thr Pro
50 55 60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
65 70 75 80

Cys Ser Val Ile Pro Lys Met Leu Gln Ser Leu Val Ser Glu Ala Arg
85 90 95

Glu Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Thr Phe
100 105 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg
115 120 125

Cys Met Ala Ile Cys Ser Pro Leu His Tyr Ala Thr Arg Met Ser His
130 135 140

Gly Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145 150 155 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Asn Phe Cys Gly
165 170 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
180 185 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Ala
195 200 205

Ala Ile Leu Cys Ile Ser Ser Pro Phe Leu Leu Ile Ile Tyr Ser Tyr
210 215 220

Val Arg Ile Leu Val Ala Val Leu Val Met Pro Ser Pro Glu Gly Arg
225 230 235 240

His Lys Ala Leu Ser Thr Cys Ser Ser His Leu Leu Val Val Thr Leu
245 250 255

Phe Phe Gly Ser Gly Ser Ile Thr Tyr Leu Arg Pro Lys Ser Ser His
260 265 270

Leu Pro Gly Met Asp Lys Leu Leu Ala Leu Phe Tyr Thr Ala Val Thr
275 280 285

Ser Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
290 295 300

Thr Ala Leu Arg Lys Thr Leu Ser Leu Lys Thr Ser Arg Ala Ile Asn
305 310 315 320

Arg

<210> 31

<211> 1002

<212> DNA

<213> Homo sapiens

<400> 31

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<210> 32

<211> 328

<212> PRT

<213> Homo sapiens

<400> 32

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Leu	Gly	Phe	Ser	Asp	Tyr	Leu	Glu	Leu	Gln	Ile	Pro	Leu	Phe	Phe	Val	
			20					25					30			
Phe	Leu	Ala	Val	Tyr	Gly	Phe	Ser	Val	Val	Gly	Asn	Leu	Gly	Met	Ile	
		35					40					45				
Val	Ile	Ile	Lys	Ile	Asn	Pro	Lys	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	
	50					55					60					
Leu	Asn	His	Leu	Ser	Phe	Val	Asp	Phe	Cys	Tyr	Ser	Ser	Ile	Ile	Ala	
65					70					75					80	
Pro	Met	Met	Leu	Val	Asn	Leu	Val	Val	Glu	Asp	Arg	Thr	Ile	Ser	Phe	
				85					90					95		
Ser	Gly	Cys	Leu	Val	Gln	Phe	Phe	Phe	Phe	Cys	Thr	Phe	Val	Val	Thr	
			100					105					110			
Glu	Leu	Ile	Leu	Phe	Ala	Val	Met	Ala	Tyr	Asp	His	Phe	Val	Ala	Ile	
	115						120					125				
Cys	Asn	Pro	Leu	Leu	Tyr	Thr	Val	Ala	Ile	Ser	Gln	Lys	Leu	Cys	Ala	
	130					135					140					
Met	Leu	Val	Val	Val	Leu	Tyr	Ala	Trp	Gly	Val	Ala	Cys	Ser	Leu	Thr	
145					150					155					160	
Leu	Ala	Cys	Ser	Ala	Leu	Lys	Leu	Ser	Phe	His	Gly	Phe	Asn	Thr	Ile	
				165					170					175		
Asn	His	Phe	Phe	Cys	Glu	Leu	Ser	Ser	Leu	Ile	Ser	Leu	Ser	Tyr	Pro	
			180					185					190			
Asp	Ser	Tyr	Leu	Ser	Gln	Leu	Leu	Leu	Phe	Thr	Val	Ala	Thr	Phe	Asn	
		195					200					205				
Glu	Ile	Ser	Thr	Leu	Leu	Ile	Ile	Leu	Thr	Ser	Tyr	Ala	Phe	Ile	Ile	
	210					215					220					
Val	Thr	Thr	Leu	Lys	Met	Pro	Ser	Ala	Ser	Gly	His	Arg	Lys	Val	Phe	
225					230					235					240	

<400> 34

Met Asp Ser Val Asn Val Ser Leu Val Thr Glu Phe Leu Leu Val Gly
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Leu Thr His Gln Pro Asp Arg Gln Ile Pro Leu Phe Leu Leu Phe Leu
20 25 30

Ala Met Tyr Leu Val Thr Ala Leu Gly Asn Leu Gly Leu Ile Ile Leu
35 40 45

Val Leu Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe
50 55 60

Asn Leu Ser Phe Ile Asp Phe Cys Tyr Ser Ser Val Phe Thr Pro Lys
65 70 75 80

Met Leu Met Asn Phe Ile Leu Arg Gln Asn Ala Ile Ser Tyr Met Gln
85 90 95

Cys Met Thr Gln Leu Tyr Phe Phe Cys Phe Phe Val Val Ser Glu Cys
100 105 110

Phe Val Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Asn Val Met Ile Ser Pro Gln Val Cys Leu Asn Leu
130 135 140

Met Ile Gly Ser Tyr Leu Met Ala Phe Ser Glu Ala Val Ala Leu Thr
145 150 155 160

Val Cys Met Leu Thr Leu Thr Phe Cys Asp Gly Asn Ile Asn His Tyr
165 170 175

Phe Cys Asp Ile Leu Ala Leu Phe Gln Leu Ser Cys Ser Ser Thr Tyr
180 185 190

Val Asn Lys Leu Val Ala Tyr Val Ile Val Val Ile Asn Ile Leu Phe
195 200 205

Ser Thr Pro Thr Ile Phe Ile Ser Tyr Gly Phe Ile Leu Ser Ser Ile
210 215 220

Phe Arg Ile Ser Ser Ser Lys Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser Gly Ala Phe
245 250 255

Val Tyr Phe Lys Pro Ser Ser Pro Gly Ser Met Glu Trp Ala Lys Ile
 260 265 270

Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Met Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Lys Asn Lys Asp Val Lys Ile Ala Leu Arg Lys Ser Leu
 290 295 300

Ala Arg Trp Lys Ile
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<210> 35
 <211> 974
 <212> DNA
 <213> Homo sapiens

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<210> 36
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 36
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Leu Ala Gly Leu Thr Asp Arg Pro Glu Leu Gln Leu Pro Leu Phe Tyr
 20 25 30

Leu Phe Leu Ile Ile Tyr Ile Ile Thr Val Val Gly Asn Leu Gly Leu
 35 40 45

Ile Ile Leu Ile Gly Leu Asn Pro His Leu His Thr Pro Met Tyr Tyr
 50 55 60

Phe Leu Phe Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe
 65 70 75 80

Ser Pro Lys Met Leu Ile Asn Phe Val Ser Glu Lys Asn Ser Ile Ser
 85 90 95

Tyr Ala Gly Cys Met Thr Gln Leu Phe Leu Phe Leu Phe Phe Val Ile
 100 105 110

Ser Glu Cys Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala
 115 120 125

Ile Cys Asn Pro Leu Leu Tyr Lys Val Thr Met Ser Pro Gln Ile Cys
 130 135 140

Ser Val Ile Ser Phe Ala Ala Tyr Gly Met Gly Phe Ala Gly Ser Ser
 145 150 155 160

Ala His Thr Gly Cys Met Leu Arg Leu Thr Phe Cys Asn Val Asn Val
 165 170 175

Ile Asn His Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys
 180 185 190

Thr Ser Thr Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile
 195 200 205

Asn Ile Thr Val Pro Ser Phe Thr Ile Leu Ile Ser Tyr Val Phe Ile
 210 215 220

Leu Ala Asn Ile Leu Asn Ile Lys Ser Thr Gln Gly Arg Ala Lys Ala
 225 230 235 240

Phe Ser Thr Cys Ser Ser His Ile Met Ala Ile Ser Leu Phe Phe Gly
 245 250 255

Ser Ala Ala Phe Met Tyr Leu Lys Tyr Ser Ser Gly Ser Met Glu Gln
 260 265 270

Gly Lys Ile Ser Ser Val Phe Tyr Thr Asn Val Gly Pro Met Leu Asn
 275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg
 290 295 300

Lys Ser Leu Ile Lys Phe Arg Glu Lys Thr Asp Phe Asn
 305 310 315

<210> 37
 <211> 1047
 <212> DNA
 <213> Homo sapiens

<400> 37
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<210> 38
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 38
 Met Glu Arg Thr Asn Asp Ser Thr Ser Thr Glu Phe Phe Leu Val Gly
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Leu Ser Ala His Pro Lys Leu Gln Thr Val Phe Phe Val Leu Ile Leu
 20 25 30

Trp Met Tyr Leu Met Ile Leu Leu Gly Asn Gly Val Leu Ile Ser Val
 35 40 45
 Ile Ile Phe Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Cys
 50 55 60
 Asn Leu Ser Phe Leu Asp Val Cys Tyr Thr Ser Ser Ser Val Pro Leu
 65 70 75 80
 Ile Leu Ala Ser Phe Leu Ala Val Lys Lys Lys Val Ser Phe Ser Gly
 85 90 95
 Cys Met Val Gln Met Phe Ile Ser Phe Ala Met Gly Ala Thr Glu Cys
 100 105 110
 Met Ile Leu Gly Thr Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Tyr
 115 120 125
 Pro Leu Arg Tyr Pro Val Ile Met Ser Lys Gly Ala Tyr Val Ala Met
 130 135 140
 Ala Ala Gly Ser Trp Val Thr Gly Leu Val Asp Ser Val Val Gln Thr
 145 150 155 160
 Ala Phe Ala Met Gln Leu Pro Phe Cys Ala Asn Asn Val Ile Lys His
 165 170 175
 Phe Val Cys Glu Ile Leu Ala Ile Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 Ser Ile Asn Val Ile Ser Met Thr Gly Ser Asn Leu Ile Val Leu Val
 195 200 205
 Ile Pro Leu Leu Val Ile Ser Ile Ser Tyr Ile Phe Ile Val Ala Thr
 210 215 220
 Ile Leu Arg Ile Pro Ser Thr Glu Gly Lys His Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe
 245 250 255
 Phe Met Tyr Ala Lys Pro Glu Ser Lys Ala Ser Val Asp Ser Gly Asn
 260 265 270
 Glu Asp Ile Ile Glu Ala Leu Ile Ser Leu Phe Tyr Gly Val Met Thr
 275 280 285

Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Ala Ala Val Lys Asn Ile Leu Cys Arg Lys Asn Phe Ser Asp Gly Lys
 305 310 315 320

<210> 39
 <211> 973
 <212> DNA
 <213> Homo sapiens

<400> 39
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Trp Met Tyr Leu Met Ile Leu Leu Gly Asn Gly Val Leu Ile Ser Val

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Asn Leu Ser Phe Leu Asp Val Cys Tyr Thr Ser Ser Ser Val Pro Leu		
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Ile Leu Ala Ser Phe Leu Ala Val Lys Lys Lys Val Ser Phe Ser Gly		
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		95
Cys Met Val Gln Met Phe Ile Ser Phe Ala Met Gly Ala Thr Glu Cys		
	100	105
		110
Met Ile Leu Gly Thr Met Ala Leu Asp Arg His Val Ala Ile Cys Tyr		
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Pro Leu Arg Tyr Pro Val Ile Met Ser Lys Gly Ala Tyr Val Ala Met		
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Ala Ala Gly Ser Trp Val Thr Gly Leu Val Asp Ser Val Val Gln Thr		
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Ala Phe Ala Met Gln Leu Pro Phe Cys Ala Asn Asn Val Ile Lys His		
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Phe Val Cys Glu Ile Leu Ala Ile Leu Lys Leu Ala Cys Ala Asp Ile		
	180	185
		190
Ser Ile Asn Val Ile Ser Met Thr Gly Ser Asn Leu Ile Val Leu Val		
	195	200
		205
Ile Pro Leu Leu Val Ile Ser Ile Ser Tyr Ile Phe Ile Val Ala Thr		
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		220
Ile Leu Arg Ile Pro Ser Thr Glu Gly Lys His Lys Ala Phe Ser Thr		
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		240
Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu		
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Glu Asp Ile Ile Glu Ala Leu Ile Ser Leu Phe Tyr Gly Val Met Thr		
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Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys		

290 295 300

Ala Ala Val Lys Asn Ile Leu Cys Arg Lys Asn Phe Ser Asp Gly Lys
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